

12.0 ECONOMIC IMPACT ASSESSMENT

12.1 INTRODUCTION

In a previous section of this report, existing (as well as projected) levels of aviation activity were identified as part of the planning process. While the level of aviation activity has importance in determining facility requirements, it may also be an indicator of economic impact by which areas adjacent to the Airport benefit from the continued operation of the Airport. To determine the economic worth of the Airport, the benefits derived from the Airport's activity must somehow be measured. These economic benefits are most readily measured by determining the economic impact of jobs, salaries, and local expenditures that result from activities occurring at Avi Suquilla Airport. The following paragraphs describe both the method of analysis and the resultant economic benefits to the community which stem from the activities at Avi Suquilla Airport.

12.2 STUDY APPROACH

The economic data necessary to determine these impacts for this analysis were obtained from two sources: Primary data were obtained from the tenant via personal interview, and secondary data were obtained from the U.S. Department of Commerce (Bureau of Economic Analysis, BEA), Local Area Personal Income figures and Regional Input/Output Modeling System (RIMS II) impact multipliers for LaPaz County, Arizona. The multipliers permit the examination of comparative impacts resulting from aviation industry expenditures on other industries and on earnings within a specific region.

The general approach used in this assessment was developed by the U.S. Department of Commerce and is used by that agency to determine regional economic impacts of different industries throughout the United States. The approach, with region-specific multipliers, is recognized by the Department of Commerce as the most appropriate approach to evaluate economic impacts of industries, including the aviation industry. Thus, the values derived in this study may be considered reliable.

12.3 ECONOMIC ANALYSIS

For this type of analysis, each tenant is assigned to a standard industrial classification (SIC). These categories enable a uniform presentation of statistical business data for each individual business type. ESE personnel translated the SIC data, as retrieved from the surveys, into RIMS II categories. These categories provide business-specific and region-specific multipliers that are then applied to the impact figures from the surveys. These, in turn, generate the primary and secondary economic impacts, for each industry and region selected, that result from the business conducted by the Airport tenants. The combination of the RIMS II, SIC and U.S. BEA income data yields both the direct sales, earnings, and employment impacts of the industries in question for the region under consideration.

Direct impacts (or first-round effects) are defined as the expenditures for goods or services that result from the activities of the tenant businesses under investigation. This figure is equivalent to the total sales revenue amount.

Earnings (or income effects) are defined as the wages earned as a result of the business expenditures under investigation. The RIMS II Earnings Multiplier determines the regionwide earnings impacts that result from first-round spending as well as all ensuing rounds of purchases. This impact thus assesses direct and induced earnings effects.

Employment effects (or the number of regionwide jobs supported by the business expenditures under consideration) are estimated by using earnings and U.S. BEA income data. The total earnings impact is divided by the average earnings per employee per region which yields the estimate of employment.

12.4 THE MULTIPLIER CONCEPT

To illustrate the use of these input/output tables, the RIMS II direct coefficients table has been aggregated to a simplified seven-industry table as shown in Table 12-1. Each column in the table shows the

Table 12-1. Direct Coefficients Table

Category	Agriculture (%)	Construction (%)	Manufacturing (%)	Trade (%)	Air Transportation (%)	Services (%)	Households (%)
Agriculture	2.89	0.96	1.53	0.14	0.09	0.40	0.83
Construction	1.35	0.04	0.35	2.08	0.29	1.66	0.64
Manufacturing	4.02	13.40	10.63	2.71	4.78	3.45	6.56
Trade	5.48	9.82	8.95	8.54	3.64	5.55	20.80
Air Transportation	1.26	2.17	2.98	2.86	7.08	1.43	2.15
Services	10.44	6.09	5.70	9.22	11.72	19.44	25.91
Households	<u>26.59</u>	<u>38.90</u>	<u>28.43</u>	<u>34.84</u>	<u>32.47</u>	<u>35.24</u>	<u>0.38</u>
Total Local Purchases	52.03	71.38	58.57	60.39	60.07	67.17	57.27
Other Payments and Imports	<u>47.97</u>	<u>28.62</u>	<u>41.43</u>	<u>39.61</u>	<u>39.93</u>	<u>32.83</u>	<u>42.73</u>
TOTAL INPUTS	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Bureau of Economic Analysis, 1982.

purchases an industry must make from every other industry to produce an additional \$100 worth of output.

Tracing through the flow of outputs induced by a \$100 purchase from the air transportation sector will assist in understanding the use of similar input/output tables. The result of this step-by-step tracing is illustrated in Figure 12-1. First, \$100 enters the economy through purchases by general aviation (i.e., air transportation). To produce \$100 worth of output, firms in the air transportation industry purchase inputs from other industries in the economy. From Column 5 in Table 12-1 (Direct Coefficients Table), \$0.09 goes to agriculture, \$0.29 to construction, \$4.78 to manufacturing, \$3.64 to trade, \$7.08 to other firms in the air transportation industry, \$11.72 to the service industry, and \$32.47 is paid to households in wages and salaries. The total of these purchases, \$60.07, is the impact of \$100 of airport sales on the local economy. Household purchases (\$32.47) represent the cost of labor to regional industries.

Capacity permitting, each of these industries must expand its output to accommodate the additional production load. Thus, in producing additional output valued at \$4.78, firms in manufacturing buy output worth \$0.07 ($0.0153 \times \4.78) from agriculture, \$0.02 ($0.0035 \times \4.78) from construction, \$0.51 ($0.1063 \times \4.78) from other firms in the manufacturing industry, \$0.43 ($0.0895 \times \4.78) from trade, \$0.14 ($0.0298 \times \4.78) from air transportation, \$0.27 ($0.0570 \times \4.78) from services, and \$1.36 ($0.2843 \times \4.78) from households, for a total of \$2.80. At the same time, each of the other industries is purchasing additional inputs to produce the outputs requested of them. The results are summarized in Figure 12-1 as the second round of spending. Other purchases follow in succeeding rounds, each smaller as money flows out of the inner industry sector into the hands of owners of primary inputs (excluding labor), government coffers, and the purchase of imported materials. This chain of purchases continues for all industries until the economy is again in equilibrium. The initial \$100 purchase from air transportation has led to the production of additional output by the

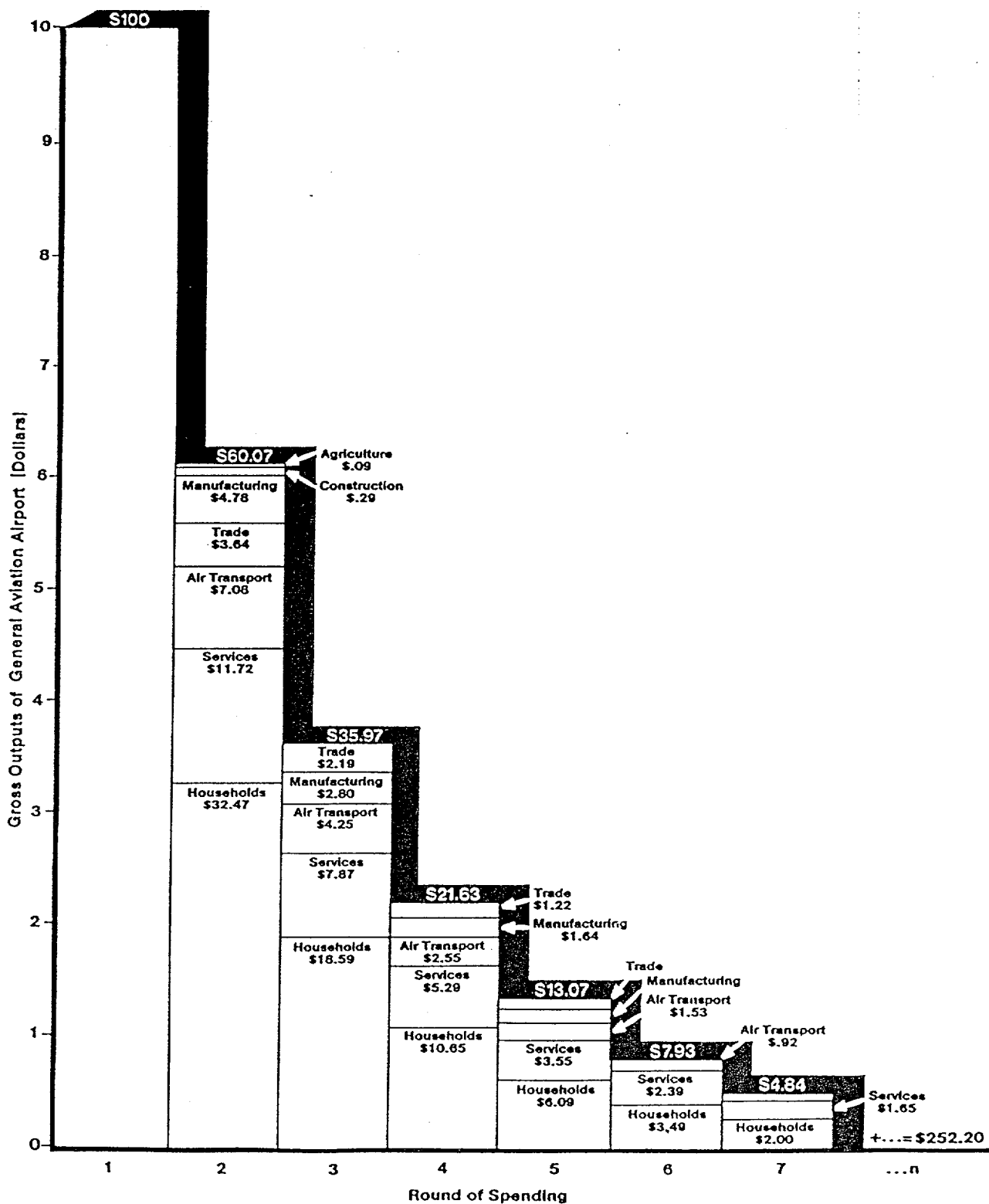


Figure 12-1
THE MULTIPLIER EFFECT OF A
100-DOLLAR SALE TO FINAL DEMAND
 SOURCE: RS&H, 1986

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entire economy valued at \$252.20, as shown in Figure 12-1. For this illustration, the value 2.522 is called the total impact multiplier.

An equivalent total earnings multiplier can be developed to show the impact of multiple rounds of purchasing. Total multipliers are used in the input/output analysis to determine total impacts directly, without the need for the iterative multiplication procedure shown in the example above.

Each set of RIMS II multipliers includes three tables: a direct coefficients table (similar to Table 12-1), a total earnings multiplier table, and a total multiplier table. The total earnings multiplier and the total multiplier tables simply count the rounds of spending to infinity, and add the figures to provide total impacts.

12.5 IMPACT COMPUTATION

The final direct demand figure for Avi Suquilla Airport consists of total payroll plus total purchases (for public entities) and total sales (for the FBO) as determined by the FBO's financial statements for FY 1984.

The total earnings impact is derived by multiplying the final demand figure by the RIMS II Earnings Multiplier column total, while employment figures are derived by dividing total earnings by average earnings per employee.

Using this method of analysis, the total direct demand figure was estimated to be \$545,081, which represents the estimated sales activity that occurred at the Airport during FY 1984.

The total earnings impact, or the total wages earned by regional workers, as a result was \$315,560. This figure represents total, regionwide amounts that incorporate a multiplier effect.

The employment effects, or total number of regional jobs generated by the sales activity at the Airport was 21 jobs. This figure is calculated by dividing the total earnings by the average earnings per employee in the LaPaz County.

12.6 TOURISM

An extensive search was made to locate information concerning the touristic character of the Parker area. Contact with numerous local and state agencies revealed no information specific to Parker; however, the Yuma County Chamber of Commerce has conducted tourist studies of the Yuma area every 2 years since 1975. Since the City of Yuma, Arizona is located approximately 125 miles south of Parker on the Colorado River, information on tourism in the Yuma area was assumed to be somewhat representative of the tourism characteristics of Parker.

The 1983 Yuma County tourist survey was answered by 410 respondents, which reflects a 7-percent increase from the 1980-81 survey. From this survey and the monthly RV park and motel/hotel occupancy surveys, the quarterly apartment occupancy survey, and the U.S. Bureau of Land Management Winter Visitor counts on public lands, it was estimated that there was an excess of 33,000 winter visitors during the peak of the season. This count was up 22 percent from the 1980-81 season and 65 percent from the initial survey in 1975-76, for an average annual growth of 9.3 percent.

In the most recent survey, 3.2 percent of the persons interviewed occupied apartments; 4.9 percent occupied mobile homes; 62.2 percent occupied trailers/motor homes in RV parks; and 26.6 percent parked their RV's on public lands. The pattern of percentages of use of accommodations dropped in RV parks and motels/hotels but rose in apartments and mobile homes over previous survey results.

Survey results on travel to the Yuma area indicated that 88.8 percent arrived by car, pickup or motor home (down 8.2 percent from the 1980-81 survey), while air arrivals were up 1.5 percent to 3.4 percent of the total, and bus travel was at 2.7 percent of the total, which was up 1.8 percent over the 1980-81 study.

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According to the Yuma study, informal observations indicated that as the length of stay increased, there was more short-trip travel away from the Yuma area. The volume of trips as compared to the number of winter visitors revealed possible new fields for business. That is, approximately 71 percent of the responses indicated a mean of 3 plus trips per winter visitor (couple). As a means of travel to Yuma, 78.9 percent used a private vehicle to make these short trips, while air travel was 9 percent and bus travel was 12 percent.

Where family income is concerned, 57.8 percent of the respondents indicated an income of \$15,000 or more, which was up 36.4 percent from the 1980-81 survey and 27.4 percent over the 1975-76 survey. Approximately 40 percent indicated an income of \$20,000 or more versus none reporting such in the 1975-76 survey. The median income was determined to be \$15,000 in the most recent survey.

Finally, the average amount of money spent per month by winter visitors was determined to be \$730.63 per couple, as compared to \$677.00 per month per couple in 1981 and \$350.00 in 1975.

As a final recommendation to the master plan study, the Colorado River Indian Tribes and/or the City of Parker may wish to initiate a program similar to the Yuma studies to learn more about the characteristics of visitors to the Parker area. It is believed that such information would not only be useful to City officials and planners in the development of Parker, but also to CRIT in the management and development of Avi Suquilla Airport.